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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/526,996

09/19/2005

Oliver Voelckers

101185-21

7948

27387 7590 05/13/2009
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EXAMINER

WALTHALL, ALLISON N

ART UNIT

PAPER NUMBER

2629

MAIL DATE

DELIVERY MODE

05/13/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/526,996	Applicant(s) VOELCKERS, OLIVER	
	Examiner ALLISON WALTHALL	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-11, 13-15, 17, 18 and 20-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-11, 13-15, 17, 18, 20-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/16/2009 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 20 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Bihusch (DE 410015).

As to **claim 20**, Bihusch teaches a control element for electronic appliances comprising a disc-shaped control element (swingplatte, figure 10) having a circular surface and an underside (figure 2);

an application casing (the bottom portion of figure 2);

a sensor (strain gauges) mounted against the underside (figure 2);

a plurality of springs positioned between the application casing and the underside of the disc-shaped control element (figure 2) in a ring-shaped fashion (i.e. the springs

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are positioned along a ring encircling the center axis) and arranged close to an edge of the disc-shaped control element (figure 2);

the disc-shaped control element, the sensor, and the plurality of springs are mounted about a common axis (the center point of figure 10);

the disc-shaped control element is tiltable about the axis by being manually manipulated any point along a circumference of the circular surface (i.e. can be tilted in any direction relative to the horizontal, see English abstract), causing the sensors to provide a cursor movement (i.e. operate as a mouse, generate x and y coordinate signals).

As to **claim 6**, Bihusch teaches the control element exhibits a smooth surface (figure 2).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4, 5, 7-9, and 21 rejected under 35 U.S.C. 103(a) as being unpatentable over Bihusch in view of Kishi (US Patent 5,903,229).

As to **claim 21**, Bihusch teaches a control element for electronic appliances comprising a disc-shaped control element (swingplatte, figure 10) having a circular surface and an underside (figure 2);

an application casing (the bottom portion of figure 2);

a sensor (strain gauges) mounted against the underside and above the application casing (figure 2);

a plurality of springs arranged between the application casing and the underside of the disc-shaped control element (figure 2);

the disc-shaped control element, the sensor, and the plurality of springs are mounted about a common axis (the center point of figure 10);

Bihusch does not teach a transmission element (26) arranged on the disc-shaped control element; a rotatable actuation disc (22) arranged on the transmission element (26); the disc-shaped control element (11) is tiltable about the axis by manually rotating the actuation disc (22) at any point along a circumference of the actuation disc (22), causing the sensors to provide a cursor movement.

Kishi (figure 24) teaches a rotatable actuation disc (21) arranged on a transmission element (i.e. rotatably attached) arranged on the disc-shaped control element (main body); manually rotating the actuation disc at any point along a circumference of the actuation disc to provide cursor movement (see column 1, line 58 column 2, line 16). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the actuation disc of Kishi on the disc-shaped element of Bihusch, such that the disc-shaped control element is tilted at the point of a user's finger pressing on the actuation disc, causing the sensors of Bihusch to provide a cursor movement, in order to make it easier for the user to rotate their finger along the circumference.

As to **claim 4**, Kishi teaches the control element (main body) equipped with a rotatable actuation disc (21) (see reason above).

As to **claim 5**, Kishi teaches the actuation disc is rotatable around an axis of the control element and is pivoted and supported over transmission elements (attachments) on the surface of the control element (see column 1, line 58-column 2, line 16).

As to **claim 7**, Kishi teaches the actuation disc exhibits a structured surface (see figure 24).

As to **claim 8**, Kishi teaches the actuation disc exhibits a geometric form tuned to the control element (see figure 24).

As to **claim 9**, Bihusch teaches the control element is shaped like a cap having a rounded edge (see figure 2). Thus as modified to include the actuation disc of Kishi, which is positioned on top of the control element of Bihusch, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the actuation disc shaped like a cap having a rounded edge, for the purpose of covering the entire control element of Bihusch.

6. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki (JP 07-107574) in view of Bihusch.

As to **claim 25**, Miyazaki teaches a method for controlling electronic appliances, comprising the steps of providing a disc-shaped control element (7) having a surface and being tiltable around an axis (i.e. inclined, see abstract),

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providing a sensor (pressure sensors 43, see drawings 10 and 11, which is axially disposed below the disc-shaped control element (i.e. internally coupled to 7),

sliding a finger (see figure 4a) over the disc-shaped control element to provide pressure onto an edge of the disc-shaped control element (i.e. lightly pushed down, see abstract), providing a tilt of the disc-shaped control element (i.e. inclined), and actuating a sensor located below the disc-shaped control element thereby registering the tilt (i.e. sensors detect the inclination direction, see abstract),

connecting the sensor to a micro processor (71) controlling a cursor movement (i.e. function mark or instruction mark) (see [0043] and [0046]),

continuing the sliding of the finger over the disc-shaped control element for continued cursor movement (see figures 9 and 13).

Miyazaki does not specifically teach providing a plurality of springs arranged axially around the sensor, and pressing down the on at least one of the plurality of springs. Bihusch teaches a plurality of springs (see figure 2) arranged axially around the axis of the control element, and pressing down on the plurality of springs (i.e. the control unit is tilted by hand pressure). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the springs of Bihusch in the method of Miyazaki in order to return the control element to neutral position after being pressed and released.

7. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki in view of Bihusch as applied to claim 25 above, and further in view of Yamazaki (US Patent 5,815,139).

As to **claim 13**, Miyazaki and Bihusch teach the method of claim 25 but do not specifically teach a stronger increasing pressure during the actuation along the edge of the control element leads to a faster cursor movement and a weaker pressure along the edge of the control element leads to a slower cursor movement. Yamazaki teaches a stronger increasing pressure during the actuation along the edge of the control element leads to a faster cursor movement and a weaker pressure along the edge of the control element leads to a slower cursor movement (see column 10, lines 4-24). It would have been obvious to one having ordinary skill in the art at the time the invention was made to change the speed of the cursor with the amount of force exerted on the control element as taught by Yamazaki in the method of Miyazaki as modified by Bihusch, in order to provide more accuracy to the user.

8. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki in view of Bihusch and Yamazaki, as applied to claim 13 above, and further in view of Goren, US Patent 7,190,351.

Regarding **claim 18**, Miyazaki in view of Bihusch and Yamazaki discloses the method according to claim 13, but does not specially teach wherein the character repertoire consists of the letters "A" to "M" at the upper edge of the screen and the letters "N" to "Z" at the lower edge of the screen.

However, Gorgen teaches a character repertoire consists of the letters "A" to "M" at the upper edge of the screen and the letters "N" to "Z" at the lower edge of the screen (Fig. 19 and 20 shows an illustration of the character selection interface with control buttons 200-204 and secondary buttons 300-305 displayed on the screen 110. The control buttons 200-204 may be placed on the left hand side while the secondary buttons 300-305 may be placed on the right hand side for the convenience of a handheld with a jog wheel, col. 17 lines 6-17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to have manipulated the character selection interface as taught by Gorgen to arrange the letters "A" to "M" at the upper edge of the screen and the letters "N" to "Z" at the lower edge of the screen to be in conjunction with the control element of Miyazaki as modified by Bihusch and Yamazaki, for the purpose of rapid selection and with ease (col. 17 lines 6-17).

9. Claims 10 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bihusch in view of Nuovo, US Design D490,405 S.

Regarding **claim 10**, Bihusch discloses the Control element according to claim 1, but does not specially teach wherein the control element exhibits tick marks consisting of twelve marks in regular intervals.

However, Nuovo teaches in Fig. 1 a control element exhibits tick marks consisting of twelve marks in regular intervals. It would have been obvious to one of ordinary skill in the art at the time of invention was made to have added twelve tick

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marks in regular intervals as taught by Nuovo to the control element of Bihusch for the purpose of providing tactile feedback for the user.

Regarding **claim 22**, Nuovo teaches the control element includes tick marks.

10. Claim 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bihusch in view of Kishi, as applied to claim 21 above, and further in view of Nuovo.

Regarding **claim 23**, Bihusch and Kishi teach the control element according to claim 21, but do not specially teach the rotatable actuation disc includes tick marks.

However, Nuovo teaches in Fig. 1 a disc exhibits tick marks. It would have been obvious to one of ordinary skill in the art at the time of invention was made to have added tick marks of Nuovo to the rotatable actuation disc of Bihusch as modified by Kishi, for the purpose of providing tactile feedback for the user, since the rotatable actuation disc is on top of the control element and is in contact with the finger.

As to **claim 24**, Kishi teaches the rotatable actuation disc includes rounded edges (i.e. the disc is round).

11. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bihusch in view Kishi, as applied to claim 4 above, and further in view of Lee (US Patent 6,804,027).

Regarding **claim 11**, Bihusch and Kishi disclose the control element according to claim 4, but do not specifically teach wherein the appliance casing exhibits tick marks

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next to the edge of the control element consisting of twelve marks in regular intervals where the actuation disc is arranged on the control element.

However, Lee teaches an appliance casing exhibits tick marks next to the edge of the control element consisting of eight marks in regular intervals where the actuation disc is arranged on the control element (Fig. 7, a control knob 701 with tick marks arrange on the housing around the outside of the control knob). It would have been obvious to have twelve tick marks in regular intervals depending on the user's or manufacture's preference. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to have combined the housing with tick marks as taught by Lee with the control element of Bihusch as modified by Kishi for the purpose of accurate adjustments (col. 4 lines 33-40).

12. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki in view of Bihusch, as applied to claim 25 above, and further in view of Tamagawa (US Patent 6,603,708).

As to **claim 15**, Miyazaki teaches the method of claim 25 but does not teach a display of a character repertoire upon actuation of the edge of the control element, the position of the actuation on the surface of the control element leading to a highlighting of a character at the corresponding position on a display and the most recently highlighted character is input when the control element is released.

Tamagawa teaches a display of a character repertoire (numbers 2-11, see figure 18A) upon actuation of the edge of the control element (10), the position of the actuation

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on the surface of the control element leading to a highlighting of a character (e.g. 6) at the corresponding position on a display (94) and the most recently highlighted character is input when the control element is released (e.g. 7, see figure 18 B and column 20, lines 15-65). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the character repertoire of Tamagawa in the method of Miyazaki as modified by Bihusch, in order to input text to an electronic device with less button presses.

As to **claim 14**, Tamagawa (figure 13A and B) teaches selecting a menu (91) by actuating the edge of the control element (10), the position of the actuation of the control element leading to a highlighting of the menu item at the corresponding position on a display (86) (also see figures 15A and B).

13. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki in view of Bihusch and Yamazaki, as applied to claim 13 above, and further in view of Tamagawa.

As to **claim 17**, Miyazaki, Bihusch and Yamazaki teach the method of claim 13 but do not teach a highlighting of a character can be selected by changing positions during the actuated state of the control element. Tamagawa teaches a highlighting of a character can be selected by changing positions during the actuated state of the control element (see column 20, lines 15-65). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the character

repertoire of Tamagawa in the method of Miyazaki as modified by Bihusch, in order to input text to an electronic device with less button presses.

Response to Arguments

14. Applicant's arguments with respect to claims 1-25 have been considered but are moot in view of the new ground(s) of rejection.

However, applicant argues regarding claims 1, 3, and 6 that Bihusch does not teach a plurality of springs positioned between the application casing and the underside of the control element in a ring-shaped fashion. Although claims 1 and 3 are cancelled, this limitation is similar in new claim 20 thus the argument is addressed here. The examiner interprets a "ring shaped fashion" such that if a ring were drawn around the pivotal center, the springs of Bihusch would lie on the ring. Although it is unclear whether more than 2 springs are present since only a cross section is exhibited, the examiner believes even these 2 springs are positioned in a ring shaped fashion with respect to the control element. Applicant also argues the springs are "close to the pivotal center". The claims require the springs are "close to" an edge of the control element, however "close to" is a broad and relative term, and the examiner interprets the springs of Bihusch as close to the edge of the control element because they would clearly be depressed when pressing on the edge of the control element.

Applicant argues on page 7, Bihusch does not allow for selecting a function or even data input and is not suitable for any direct selection, does not disclose a user interface, nor can recognize a circular movement with variable speed. These features are not recited in the rejected claim(s) being argued and the examiner has not used

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Bihusch to teach these features. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant argues on page 8, last paragraph-page 9, first paragraph that Bihusch only captures the position of actuation at the four points where the strain gauges are mounted. The examiner disagrees. For example, an actuation half way between 2 strain gauges may deform both strain gauges by an amount less than an actuation directly above the strain gauges. This actuation could be analyzed by determining that the outputs of the 2 strain gauges are of an equal, non-zero magnitude. Thus Bihusch is not limited to only detecting the 4 points where the strain gauges are located. In addition, Bihusch discloses (see English abstract) that the control element can be tilted in any direction relative to the horizontal. Thus Bihusch clearly teaches "the disc-shaped control element is tiltable about the axis by being manually manipulated any point along a circumference of the circular surface".

The arguments regarding the references of Goldenberg and Kehstadt, and regarding claims 4-5, 7-9, and 13-18 are moot in view of new grounds of rejection.

Applicant argues on page 15, 2nd and 3rd paragraphs regarding claim 10, that Bihusch and Nuovo would not allow for direct selection or character input by directly actuating the edge of the disc. These features are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Applicant also argues the tick marks would not be

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advantageous for operating the device. However the tick marks provide the advantage of tactile feedback to the user.

Applicant argues on page 15, 4th and 5th paragraphs regarding claim 11, that Bihusch and Lee would not allow for direct selection or character input by directly actuating the edge of the disc. These features are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Applicant also argues the tick marks would not be advantageous for operating the device. However the tick marks provide the advantage of visual reference points so that the user is able to be more accurate.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALLISON WALTHALL whose telephone number is (571)270-3571. The examiner can normally be reached on Mon - Fri 9:30-6:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chanh Nguyen can be reached on (571) 272-7772. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

anw
May 6, 2009

/Chanh Nguyen/
Supervisory Patent Examiner, Art
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